



ANALYSIS OF TRAINING NEEDS OF VOCATIONAL TRAINERS IN SKILL DEVELOPMENT- A CASE STUDY FROM VHSE, KERALA

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ABSTRACT

Quality Skill education is recognized as the greatest weapon of India to reap its demographic dividend as it is one of the youngest nations in the world with more than 62% of its population in the working age group (15-59 years). Appropriate quality measures of real-world learning include effective teaching. The excellence of any education depended on the preparation of quality teachers. The vocational teachers/trainers should have core vocational competencies and pedagogical skills to deliver the best possible skills for every child. Vocational education teachers need dual professional identify of both workers skilled in a particular occupation and as teachers. Unlike other subjects, the curriculum of vocational subjects is always dynamic. So teacher must be a lifelong learner and should be a reflective practitioner. The roles of these trainers are more crucial in the State like Kerala, where the industrial density is very less.

This study examines the role of vocational teachers and instructors in skill development in Vocational Higher Secondary schools of Kerala. The focus is on investigating issues that occur within daily instruction, such as teaching models, instructional problems, instruction methods and classroom management. Data were collected and analysed to reveal vocational trainers teaching practices. The conclusion is that vocational trainers need to improve their teaching skills and core technical skills and to recognise what is important to students so that they can motivate student learning.

INTRODUCTION

Vocational Education in a broader sense covers education and skill development at all levels from post primary to tertiary education - both through formal and non-formal programmes. Vocational Education at the higher secondary stage, develop competencies (knowledge, skills and attitude) required by a specific occupation or a group of occupations. It prepares pupil for the world of work, especially for self-employment.

In tune with National Policy, Vocational Higher Secondary Education was introduced in Kerala in 1983-84. This scheme of education is imparting vocational education at plus two level in the State. The objective of the system is to achieve self/ wage employment as well as vertical mobility. The course is designed to prepare skilled work force at middle level after matriculation at 10+2 stage of education. At present, 389 Vocational Higher Secondary Schools are functioning in the state with a total of 1100 batches for 35 courses. There are different streams such as Engineering, Paramedical, Agriculture, Home science, Travel & Tourism and Commerce. There are 2200 trainers (1100 vocational teachers and 1100 vocational instructors) in this education system.

Government of India has undertaken a target of creating 500 million skilled workforce in India by 2022. According to National Skill Development Corporation (NSDC), the great challenge of skill development on our country remains in developing right skill sets among our youths matching global standards with relevance to both local and global job markets. This is possible only through efficient trainers. According to NSDC, trainers form a critical part in whole institutional delivery mechanism of vocational skill development. The role of teachers are very important to make sure students will perform well while complete the practical task (*Adnan Ahmad, Yusri Kamin, 2014*).

STATEMENT OF THE PROBLEM

According to *Claudia Hofmann, Barbara E. Stalder, 2014*; teachers at vocational educational and training (VET)-schools, as well as trainers at VETcompanies, provide important support to learners' career aspirations . The quality of vocational training depends on the excellence of teachers. There are teachers and instructors as teaching staff for vocational subjects in Kerala Vocational Higher Secondary Education. They have professional qualifications but lacks occupational experience and teaching skill. According to *N. Sethumadhavan, 2005*, Vocational teachers of Kerala Vocational Higher Secondary Course do not possess the required professional competency. They are professionally qualified but practically no experience.

In their research report in 2007, *SCERT Kerala* informed that the teacher training in VHSE is not satisfactory. There must be thorough changes teacher training. The situation of VHSE gets worse because of the lack of teacher training programmes (*KCF-2007*). Almost all of the literatures re-iterates the need of trainer training in this education system. So there should be a scientific analysis of training needs of the trainers for effective implementation of competency based curriculum.

Pedagogy of Vocational Education (vocational pedagogy)

The concept of vocational pedagogy covers instructional strategy to teach vocational subjects in such a way that students learning experiences exist in work setting environment (*Syahron Lubis, 2010*). This kind of instructional strategy includes both school-based and work-based learning. Delivering system for vocational subjects differs from that of academic subjects. As *Bill Lucas, Ellen Spencer and Guy Claxton, 2012* explain that the primary outcome of vocational education is expertise. This distinguishes this education from academic form of education where the valued goal is to be able to write and talk something; to be able to explain critique, theorise and justify. Vocational education is the education for work and it makes provision for learner development of occupational skills in simulated and realistic work conditions. We cannot learn 'driving' in a class room without a vehicle. Thus, work place is indispensable for vocational subjects. We must evaluate critically whether work based learning is implemented properly in our Vocational Higher Secondary curriculum.

Some theoretical considerations

Recent research evidences from Australia and Europe says that the VET (Vocational Education and Training) pedagogy is becoming learner-centered, work-centered and attribute focused (*Clive Chappell, 2004*). Learner constructs knowledge, skill and attitude through experiences from work place. Work has always been the central focus of the Vocational Education Training sector. According to *Colin Beard, John P Wilson (2007)*, learning cycle has four distinct stages;

- Concrete experience
- Thinking about experience
- Generalising and conceptualizing about experience
- Applying the ideas and thoughts to new experience

They explain that if we do not get as far as stage three, then we have not really learnt from experience. Experiential learning which means learning through experiences is the central in vocational learning. Theories of experiential, activity based learning including constructivist theories and situated learning are prevalent in vocational learning (*Sally Faraday, Carole Overton, Sarah Cooper, 2011*). Situated learning involves the acquisition of knowledge and skills in the situations in which they will be used.

In *Istanto Wahyu Djatmiko's (2010)* views, constructivism and social – constructivism learning approach can be selected for implementing instructional strategies in this knowledge era. Constructivism is the theory that people learn by constructing knowledge through interpretive interactions with the social environment. It helps students to connect learning with life experiences, making constructivism highly relevant to vocational and career educators (*Bettina Lankard Brown 1998*). Acquiring skills through solving the real world problem is the heart of social constructivist pedagogy. On-the-job training, Apprenticeship training, Production/service cum Training Centers, Field visits, Vocational survey are some of the learning activities where knowledge and skill are constructed through social interaction.

Secondary level career education based largely on human capital assumptions generally categorizes critical thinking and problem solving as transferable employability skills (*Emery J. Hyslop-Margison Joseph L. Armstrong, 2004*). Critical thinking is reasonable reflective thinking focused on deciding what to believe or do (*Wikipedia*). Mere practice of an activity may lead the learners to stick on the same process for solving a problem (Servicing of same machine having the same problem in school work shops). Learner must get enough opportunities to construct their own solution by interpretive interaction with others so that they can think critically. For that he should get more experiences in different situations (even in real life situations).

OBJECTIVES OF THE STUDY

To study the training need analysis of teachers/instructors in Vocational Higher Secondary Education of Kerala.

1. To identify the effective learning activities suitable to Vocational Higher Secondary Education of Kerala based on the principles of teaching and learning in skill education programs.
2. To evaluate effectiveness of present teaching and learning methods of Vocational Higher Secondary education system.
3. To study the skill gap of trainers of Vocational Higher Secondary Education of Kerala for effective skill acquisition of learning outcomes.

METHODOLOGY OF STUDY

Analytical study which includes document analysis and interview schedule analysis is conducted. Document analysis was the main study and was based on the specific objectives (core areas). The same core areas were included in the interview schedule also. Stratified random sampling techniques were adopted for the sample selection. Interviews with teachers and instructors of different courses, departmental officials, industrialists and educational experts were conducted. The area of the study was vocational higher secondary education in Kerala.

Vocational education teachers

Vocational education teachers need dual professional identity of both workers skilled in a particular occupation and as teachers. For successful implementation of a vocational education, the teachers should have both expertise in the vocation and a pedagogical orientation. Intermittent industrial experience is vital for the teacher/instructor to acquire the up-to-date skills in the vocation. Unlike other subjects, the curriculum of vocational subjects is always dynamic. So teacher must be a lifelong learner and should be a reflective practitioner. The roles of these teachers for skill development are more crucial in the State like Kerala, where the industrial density is very less. All most all the teachers participated in this survey reported that they did not get any industrial training in their service. 63% of these teachers are having more than 10 years service.

According to *Shyamal Majumdar, 2011*; the new role of teachers demands a new way of thinking and understanding of the new vision of the learning process. As a facilitator in constructivist approach, teacher should arrange multiple learning experiences to the learner in different situations. He can actively participate/demonstrate in the initial stage and then slowly he should recede his assistance for developing the independent problem solving capacity of the learner. *Sally Faraday, Carole Overton, Sarah Cooper (2011)* reported in their publication that the learning is initiated from teacher directed, through guided learning, to cooperative learning and ultimately independent learning. They should have good relationship with learners.

Emerging workplace demands a new set of generic skills for the learners, which are generic to a cluster of occupations in order to perform competently as a knowledge worker. (*Shyamal Majumdar, 2011*). Thus, the trainer in a particular vocational education should have the generic skills needed for that occupation. In addition to job-specific technical competencies and teaching skills, there is a requirement of a set of generic skills. So, it is very difficult to become an effective teacher in vocational education. Industrial experience in the concerned industry is the best solution for this. Only a very few teachers in Kerala VHSE has this industry experience.

Adnan Ahmad, and Yusri Kamin, 2014 report that teachers in the vocational field should have alternative certification options especially in occupational areas because there is a lack of teachers for occupational education. 7% of the teachers/instructors participated in the survey (especially from courses like Medical Laboratory Technology, Civil Construction Technology, Automobile Technology, etc.) are unofficially (they don't have any recognised certificates) practicing in their respective occupational area. They should give approved certificates and encourage to practice in their respective vocational area.

Good teachers are always learning not only the subject skills but also the teaching skills. They learn from experience. Effective teachers are reflective and they constantly review their practice.

LEARNING METHODS

While thinking about the learning methods of vocational education, we must remember that this education is work-based. The 'learning by doing' approach

can be used in most of the learning methods. But for getting resourcefulness (apply knowledge in different contexts), theoretical understanding is also necessary. Theory should not be isolated from practical activities as it happens in most of the vocational subjects. As *Lorna Fitzjohn*, quoted in the publication by *Bill Lucas, Ellen Spencer and Guy Claxton, 2012* explains that since theory and practice happen in geographically different places, or at different times; sometimes the learner won't be able to see that these two relate together. So learning methods should balance theoretical and practical components and they complement each other.

In activity based curriculum, most of the learning methods are progressing through group works. Learners work together for solving a problem. This improves the team spirit and creates a democratic atmosphere in class room/workshop/work place. It helps the cooperative and collaborative learning. The use of inquiry, discovery and problem solving approaches can be incorporated in teaching and learning process. The number of learners in a group will depend on the specific learning objectives (sub competencies). The teacher as a facilitator must try to relate the maximum learning activities directly to the real world of work.

We need to develop the individual capacity of the learner for solving a problem alone. Most of the industries assign independent tasks to their employees (automation needs only few people on machines and mostly have individual tasks). Developing individual capacity is also needed for a good entrepreneur. There should be a space for self-learning in all learning activities. It helps him/her for life-long learning and thus can develop skills for future labour markets.

Some of the learning methods are given as:

1. Learning through deliberate practice.
2. Learning by watching and imitating.
3. Learning through simulation.
4. Learning through virtual environment.
5. Learning by real-life problem solving.
6. Learning through playing games.

As already stated, deliberate practice, which is the core of vocational education involves a focus on improving particular tasks. *Alan Brown, Liz Browne, Kathleen Collett, Chris Devereux, Jill Jameson. (2012)* illustrates that each learner should get coaching in a particular skill for a certain period of time. This is with the aim of helping them to learn to do job as fast as possible before moving onto the next station. On-the-job training and Apprenticeship training are some form of deliberate practice.

Learning by watching others is a common way of learning. Demonstration of real life situation (like field visit) or models gives the learner an opportunity to watch. Watching the real work-place or virtual settings or using ICT (work place videos) are the learning process. After closely watching, imitating the activity is the way of trying to implement what was observed. Imitating the unwanted things from work places should be avoided.

Industrial simulation when used as an educational tool in the context proposed is part of an enquiry based learning (EBL) approach. During his research, *Simon Mclean, 2012* concluded that Simulation can be a valid tool for delivering teaching, learning, assessment and vocational skills training to surveying students. The real learning environment for industry related vocations is very rare in our state which is industrially poor. Simulation of natural setting is one of the solutions for it. As *Colin Beard, John P Wilson 2007* says – creation of artificial nature is growing and moving indoors. Production / Service cum Training Centres have an industrial simulation environment. It has an industrial atmosphere in indoor. But certainly simulation has its own limitations than work-place learning.

Learning through playing games is seemingly fun activities involving all participants. There are some learning objectives in some vocational subjects related to *Symbols* that can be learned through games.

Some learning methods will suit certain learners just as some teaching methods will be preferred by some teachers and avoid others. The choice/use of the appropriate teaching model (or combination of teaching models) is influenced by the type of learning outcome, the nature of the learners as well as other factors such as teaching strategies and teaching skills. (*Sally Faraday, Carole Overton, Sarah Cooper, 2011*). Most of the teachers in VHSE are not giving much emphasis on selection of teaching methods according to the learning outcomes. Contexts will influence choice too. According to *Istanto Wahyu Djatmiko, 2010*; choosing appropriate teaching strategies is needed indeed, so that the learning process can adapt to the new context of schooling that related to the changing of technology and a workforce setting. Anyway, real life problem solving is most suited learning method in vocational education.

E-Learning in Vocational Education and Training

According to *Shyamal Majumdar, 2011*; ICT provides powerful tools to support the shift from teacher-centered to learner-centered paradigm and new roles of teacher, learner, curricula and new media. The major emphasis of ICT infusion in pedagogy should be such that it tends to improve learning, motivate and engage

learners, promote collaboration, foster enquiry and exploration, and create a new learner centered learning culture. The trainers in vocational education need computer literacy especially in multimedia. More than 90% of the trainers have computer literacy. But they are not usually practicing it because of many reasons such as nonavailability of internet facilities, LCD projects, CDs and less awareness of computer resources.

Vocational learning generally requires real hands-on experience. The use of e-learning is relevant to both the practical and the theoretical worlds in the sense that an increased use of e-learning can usually improve teaching and learning in both settings (*Final Report to the EU Commission, 2005*). Information Technology can be treated as a learning tool for development of functional literacies and entrepreneurial skills. Learning through virtual environment is suited for the courses dealing with people.

SUGGESTIONS:

- Proper industrial based training should be given to all trainers as early as possible. Prime importance should be given to the areas where curriculum has changed.
- A short term course regarding the teaching skill should be given to all trainers which include vocational pedagogy, Learners' psychology, class room management, assessment, etc.
- A training and development department with industry participation should set up for continuous development of trainers.
- Urgent need of implementation of NSQF (National Skill Qualification Framework) in VHSS is necessary. This will ensure the industry support in trainer training also.
- Training regarding Competency Based Assessment System is another area which should be addressed in trainings.
- Government should give approved certificates to vocational trainers and encourage them to practice in their respective vocational area.
- Make the special training a mandatory at least in special schools. The training of general teachers at pre-service and in-service levels should address the issue of education of children with disabilities, so that teachers are better equipped to work in an inclusive environment. Some of the issues in training that need to be addressed include the methodology to be adopted for identifying children with disabilities; classroom management; use of appropriate teaching methodologies; skills for adapting the curriculum; development of teaching-learning materials that are multi-sensory in nature; evaluation of learning; etc.
- Training on usage of ICT especially on multimedia is also another important area trainers needed. Training should be given how to develop E-learning supporting the vocational pedagogy.
- Frequent Parent training should be conducted and it empowers parents through sharing knowledge in a range of topics relevant to vocational rehabilitation, disability management and inclusion.
- Trainer training should address the selection of teaching methods according to the learning outcomes, contexts and learners.
- Basic training regarding vocational school management to educational administrators is also necessary.
- Good research should be conducted in the area of vocational pedagogy, classroom management, training effectiveness and skill assessment for general and for differently abled children.

CONCLUSION

The role of trainers are very important to make sure students will perform well while complete the practical task in vocational courses. It should be ensure that all vocational trainers should have vocational skill, generic skill and pedagogical skills. Intermittent industrial experience is vital for the teacher/instructor to acquire the up-to-date skills in the vocation.

Teachers can make use of various methods to make teaching more effective. Appropriate selection of teaching methods will improve the quality of vocational education. Learning methods should be more interactive and real-world based. Cooperation with enterprises is vital for successful training for trainers. So it is better to implement NSQF in the Kerala Vocational Higher Secondary Education System. By adopting these strategies in trainer trainings we can improve the effectiveness of trainers and thus lead to a Quality Skill education.

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